PORTFOLIO 1 - STUDENT SUBMISSION

Student Name: Add your name here Student ID: Add number here

Stream: Add Year and Stream

Submit this document by the due date to Moodle when you have completed it.

WATER SUPPLY

Learning Outcomes:

1. Investigate how water is supplied and treated
2. Investigate related legislative requirements
3. Recognise and name the components and fixtures related to a reticulation system
4. Produce an accurate installation diagram from a floor plan
5. Create an instructional job card
6. Prepare pipework for installation
7. Install under supervision a water reticulation system for hot and cold water
8. Install under supervision a low-pressure hot water system

**Learning Outcome 1:**

Investigate how water is supplied and treated

Add a diagram that you have created and labelled using key words that shows clearly the process of how water is supplied to a home, as clean potable water, then treated and recycled. This can not be something that you have copied off the internet of the Moodle page or out of a book it must be your own work.

**Add diagram here**

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**REPLACE THIS IMAGE**

In no more than two paragraphs describe your diagram using key words from the glossary.

**Add Description of the Water Supply and Treatment Process here.**

**REPLACE THIS IMAGE**

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**Learning Outcome 2:**

Investigate related legislative requirements

 G12: Requires the safe supply, storage, reticulation and delivery of hot and cold water.

In the table below provide a reference from the G12 document that relates to the following situations. Explain why this is important.

|  |  |  |
| --- | --- | --- |
| Situation  | Building Code Reference | Why is this important? |
| Installing a sanitary hand basin |  |  |
| Storing potable water for home use |  |  |
| Supplying hot water to a tap |  |  |
| Another example |  |  |

**Learning Outcome 3:**

Recognise and name the components and fixtures related to a reticulation system

|  |  |  |
| --- | --- | --- |
| Image | Name of fixture | Purpose |
|  |  |  |
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**Learning Outcome 4:**

Produce an accurate installation diagram from a floor plan

When installing pipework in a home it is useful to know where the pipes need to go. Referring to architectural plans and / or drawing a plan can help you think of issues ahead of time and plan your job more effectively.

On the following page add a picture of your completed floor plan for hot water and cold-water supply to the bathroom, toilet and kitchen.

Include:

1. Blue lines for cold
2. Red lines for hot water
3. Label where fixtures will be located
4. Label Mains water lines from council access



|  |
| --- |
| INSTALL A WATER TANK AND PIPE WORK |
| Tools Required:* Add to this list
 | Fittings and Fixtures Required:* Add to this list
 |
| PROCEDURE |
| Step: 1. What needs to be prepared for this job
2. Add to your procedural list here
 |
| LEGISLATION |
| 1. Reference any legislation that relates to this job or the environment the appliance / fitting is located in.
2. Add to list here
3. Add to list here
 |
|  |
|  |
|  |
| CALCULATIONS |
| Add an image of any calculations you did here |

**HEALTH AND SAFETY RISK ASSESSMENT**

Complete the following form for this job as a hard copy and get your Tutor to sign it. Add a quality photo or photocopy of your completed form in the space below.

HEALTH AND SAFETY RISK ASSESSMENT FORM

**ACTIVITY: Water Tank**

|  |
| --- |
| **IDENTIFY RISKS: Highlight / tick those that apply** |
| Tick the potential risks(s) for this activity: |
| * Slips, trips and falls
 | * Heavy items that could fall
 | * Sharp objects or tools
 | * Electrical equipment (incl. power tools)
 |
| * Gas equipment
 | * Machinery (moving parts)
 | * Machinery (sparks)
 | * Hand tools
 |
| * Toxic fumes and dust
 | * Poisonous chemicals
 | * Flammable substances
 | * Excessive noise
 |
| * Ladders (heights)
 | * Temperature
 | * Fatigue
 | * Flames
 |
| List any other risks:Add text here |

|  |
| --- |
| **RISK CONTROL METHOD:** |
| Write what you will do to eliminate or minimise each risk: |
| **RISK:** | **WHAT MIGHT HAPPEN:** | **HOW YOU WILL ELIMINATE:** | **HOW YOU WILL MINIMISE:** |
|  |   |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |
| --- |
| **PERSONAL PROTECTIVE EQUIPMENT (PPE):** |
| Tick the personal protective equipment (PPE) needed to complete this activity: |
| * Footwear
 | * Overalls
 | * Safety glasses
 | * Safety gloves
 |
| * Welding mask
 | * Earmuffs / earplugs
 | * Hard hat
 | * Hi-vis vest
 |
| List any other personal protective equipment (PPE) required:Add text here |

Add text here

Write or draw about what you plan to do to complete this activity.

**PLANNING:**

|  |  |  |  |
| --- | --- | --- | --- |
| **TUTOR SIGNATURE:** |  | **DATE:** |  |

Photographic Evidence of Water Tank installation and pipe work

|  |  |
| --- | --- |
| Step 1 | Step 2 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 3 | Step 4 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 5 | Step 6 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |

|  |
| --- |
| INSTALL A LOW-PRESSURE HOT WATER CYLINDER AND PIPE WORK |
| Tools Required:* Add to this list
 | Fittings and Fixtures Required:* Add to this list
 |
| PROCEDURE |
| Step: 1. What needs to be prepared for this job
2. Add to your procedural list here
 |
| LEGISLATION |
| 1. Reference any legislation that relates to this job or the environment the appliance / fitting is located in.
2. Add to list here
3. Add to list here
 |
|  |
|  |
|  |
| CALCULATIONS |
| Add an image of any calculations you did here |

**HEALTH AND SAFETY RISK ASSESSMENT**

Complete the following form for this job as a hard copy and get your Tutor to sign it. Add a quality photo or photocopy of your completed form in the space below.

HEALTH AND SAFETY RISK ASSESSMENT FORM

**ACTIVITY: Hot Water Cylinder**

|  |
| --- |
| **IDENTIFY RISKS: Highlight / tick those that apply** |
| Tick the potential risks(s) for this activity: |
| * Slips, trips and falls
 | * Heavy items that could fall
 | * Sharp objects or tools
 | * Electrical equipment (incl. power tools)
 |
| * Gas equipment
 | * Machinery (moving parts)
 | * Machinery (sparks)
 | * Hand tools
 |
| * Toxic fumes and dust
 | * Poisonous chemicals
 | * Flammable substances
 | * Excessive noise
 |
| * Ladders (heights)
 | * Temperature
 | * Fatigue
 | * Flames
 |
| List any other risks:Add text here |

|  |
| --- |
| **RISK CONTROL METHOD:** |
| Write what you will do to eliminate or minimise each risk: |
| **RISK:** | **WHAT MIGHT HAPPEN:** | **HOW YOU WILL ELIMINATE:** | **HOW YOU WILL MINIMISE:** |
|  |   |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |
| --- |
| **PERSONAL PROTECTIVE EQUIPMENT (PPE):** |
| Tick the personal protective equipment (PPE) needed to complete this activity: |
| * Footwear
 | * Overalls
 | * Safety glasses
 | * Safety gloves
 |
| * Welding mask
 | * Earmuffs / earplugs
 | * Hard hat
 | * Hi-vis vest
 |
| List any other personal protective equipment (PPE) required:Add text here |

Add text here

Write or draw about what you plan to do to complete this activity.

**PLANNING:**

|  |  |  |  |
| --- | --- | --- | --- |
| **TUTOR SIGNATURE:** |  | **DATE:** |  |

Photographic Evidence of Low-Pressure Hot Water Cylinder Installation and pipe work

|  |  |
| --- | --- |
| Step 1 | Step 2 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 3 | Step 4 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |
| Step 5 | Step 6 |
| In a paragraph explain what is happening in this picture. | In a paragraph explain what is happening in this picture. |